I claim:

1. An apparatus for heating a segment of oil and gas well bores and surrounding strata comprising:

an electrical resistance heating rod,

electrical cable for carrying electrical current from an electrical current source outside of the well bore to said electrical resistance heating rod when positioned inside of said well bore;

a protective block in which is embedded said electrical cable and said heating rod where they are connected to one another, said protective block being constructed of a moldable material which, when cured, is substantially impervious to pressure and chemical permeation and oil and gas well bore bottom pressures and environments;

a metallic encasement member encasing said protective block and sealably welded to form a substantially impervious enclosure with said block and said embedded portion of said heating rod and said electrical cable

therein, except that said metallic encasement admits said electrical cable and said heating rod there into for attachment;

a perforated production tubing segment, a proximal perforated production tubing segment end of which is reversibly engageable to a distal terminus of oil or gas well production tubing string and a distal perforated production tubing segment end of which is engageable with said metallic encasement member; and

a heating rod support frame which extends from said metallic encasement means opposite its engagement with said perforated production tubing segment and in which a portion of said heating rod is supported.

2. The apparatus of claim 1 further comprising a first and second connector pin, where said first pin joins said electrical cable to said second pin and said second pin joins said heating rod to said first pin.

3. The apparatus of claim 2 wherein said protective block is further comprised of an insulated portion that encloses the connection between said first pin and said second pin.

4. The apparatus of claim 3 where said metallic encasement member contains a reversibly sealable aperture through which said moldable material may be repeatedly injected to said block to ensure the absence of any void.

5. The apparatus of claim 4 where said metallic encasement member is welded together using the "TEG" welding process so as to impart extraordinary strength to said metallic encasement member.

6. The apparatus of claim 1 wherein said protective block is further comprised of an insulated portion that encloses the connection between said first pin and said second pin.

7. The apparatus of claim 6 where said metallic encasement member contains a reversibly sealable aperture

through which said moldable material may be repeatedly injected to said block to ensure the absence of any void.

8. The apparatus of claim 7 where said metallic encasement member is welded together using the "TEG" welding process so as to impart extraordinary strength to said metallic encasement member.

9. The apparatus of claim 1 where said metallic encasement member contains a reversibly sealable aperture through which said moldable material may be repeatedly injected to said block to ensure the absence of any void.

10. The apparatus of claim 9 where said metallic encasement member is welded together using the "TEG" welding process so as to impart extraordinary strength to said metallic encasement member.

11. The apparatus of claim 1 where said metallic encasement member is welded together using the "TEG" welding process so as to impart extraordinary strength to said metallic encasement member.

12. A method for enhancing production from an oil and gas well comprising the steps of:

selecting an apparatus for heating a segment of oil and gas well bores and surrounding said apparatus comprising:

an electrical resistance heating rod,

electrical cable for carrying electrical current from an electrical current source outside of the well bore to said electrical resistance heating rod when positioned inside of said well bore;

a protective block in which is embedded said electrical cable and said heating rod where they are connected to one another, said protective block being comprised of a moldable material which, when cured, is substantially impervious to pressure and chemical permeation and oil and gas well bore bottom pressures and environments;

a metallic encasement member encasing said protective block and sealably welded to form a substantially

impervious enclosure with said block and said embedded portion of said heating rod and said electrical cable therein, except that said metallic encasement admits said electrical cable and said heating rod there into for attachment;

a perforated production tubing segment, a proximal perforated production tubing segment end of which is reversibly engageable to a distal terminus of oil or gas well production tubing string and a distal perforated production tubing segment end of which is engageable with said metallic encasement member; and

a heating rod support frame which extends from said metallic encasement means opposite its engagement with said perforated production tubing segment and in which a portion of said heating rod is supported;

positioning said heating rod adjacent to a production zone in an oil or gas well bore, production from which zone is believed to be impeded by viscous materials; and

attaching an electrical current source to said electrical cable; and

actuating said electrical current source to heat said heating rod and thereby heat said viscous materials in said production zone for reducing viscosity of said viscous materials for, in turn, producing said viscous materials.

13. The method of Claim 12 wherein said positioning of said heating rod adjacent to a production zone in an oil or gas well bore involves positioning said heating rod at a greater depth within said bore than said production zone to thereby allow heat from said heating rod to rise toward said production zone and said viscous materials situated therein.